

LAKE: PIPER P (VLMP 21)
TOWN: ABBOT
COUNTY: PISCATAQUIS

MIDAS: 298
TRUE BASIN: 1
SAMPLE STATION: 1

WHOLE LAKE INFORMATION

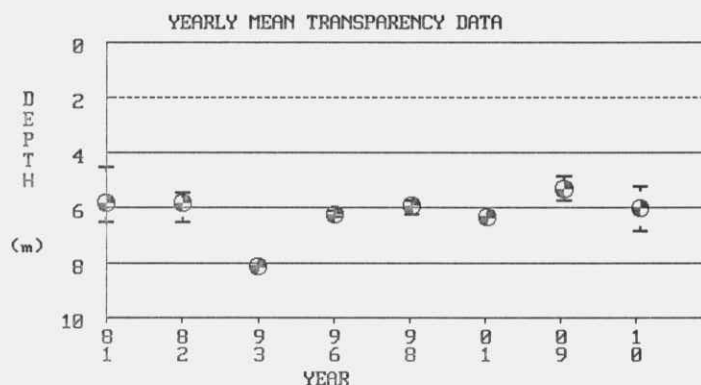
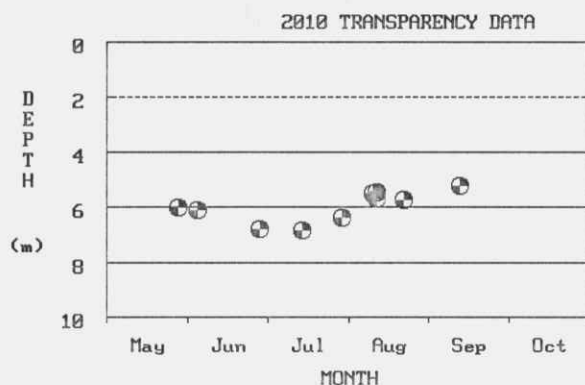
MAX. DEPTH: 17 m. (56 ft.)
MEAN DEPTH: 5 m. (18 ft.)
DELORME ATLAS #: 31
USGS QUAD: WHETSTONE POND
IFW REGION E: Moosehead Lake (Greenville)
IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 164.0 ha. (405.2 a.)
FLUSHING RATE: 0.62 flushes/yr.
VOLUME: 10584410.0 cu. m. (8586 ac.-ft.)
DIRECT DRAINAGE AREA: 9.68 sq. km. (3.74 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. PIPER P has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:



Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visible at bottom of lake (or one reading used in calculation was visible)].

YEAR	MEAN	MEAN	MEAN	MEAN	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES				
	COLOR	pH	ALK	COND.	EPI	SURF	BOT.	PRO.												
	(SPU)		(mg/l)	(uS	/cm	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1981	-	-	-	-	-	-	-	-	-	4.5	5.8	6.5	6	-	-	-	-	-	41	-
1982	20	6.50	7.0	25	11	-	-	8	-	5.4	5.8	6.5	6	2.5	2.5	2.5	-	-	41	-
1993	5	-	7.5	-	5	-	-	-	-	8.1	8.1	8.1	1	-	-	-	-	-	-	-
1996	18	-	33.3	12	6	-	-	8	-	6.1	6.2	6.3	1	3.7	3.7	3.7	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	5.7	5.9	6.2	4	-	-	-	-	-	-	-
2001	12	7.05	4.3	23	5	-	-	10	-	6.3	6.3	6.3	1	1.8	1.8	1.8	-	-	-	-
2009	-	-	-	-	-	-	6	-	-	4.8	5.3	5.7	3	-	-	-	-	-	-	-
2010	-	-	-	-	8	-	-	-	-	5.2	6.0	6.8	5	2.9	2.9	2.9	-	-	39	-
SUMMARY:	14	6.69	13.0	20	7	6	8	-	-	4.5	6.2	8.1	8	1.8	2.7	3.7	-	-	40	-

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LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH	SAMPLE DATE											
	08/26/82		08/27/93		08/21/96		08/28/96		08/17/01		08/11/10	
m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	18.5	8.7	24.0	8.5	22.0	8.9	23.8	8.7	24.7	8.1	22.7	8.6
1.0	18.8	8.6	23.3	8.5	22.1	8.9	22.2	8.9	23.8	8.1	22.7	8.6
2.0	18.8	8.7	23.0	8.5	22.0	8.9	22.0	8.9	23.8	8.1	22.6	8.6
3.0	18.6	8.7	22.8	8.5	21.8	8.8	21.9	8.8	23.2	8.1	22.5	8.6
4.0	18.6	8.6	22.4	8.3	21.7	8.7	21.8	8.8	23.2	8.1	22.4	8.6
5.0	18.3	8.6	22.2	8.3	21.0	8.2	21.3	8.2	23.1	8.0	22.1	8.4
6.0	18.2	8.6	21.8	8.1	19.0	5.8	20.1	6.6	22.0	7.8	21.1	7.8
7.0	18.0	8.5	20.8	7.0	16.2	4.0	12.7	4.0	16.9	6.9	18.6	5.3
8.0	14.5	5.1	18.1	3.2	14.0	2.5	14.3	1.8	13.8	5.2	15.4	2.5
9.0	12.0	3.6	15.2	0.3	12.8	2.1	13.0	1.4	12.0	3.6	13.8	1.7
10.0	10.8	2.8	14.8	0.1	12.2	2.0	12.3	1.2	11.1	3.1	13.2	1.4
11.0	10.2	2.6	14.2	0.1	12.0	1.9	12.2	1.2	10.8	2.8	12.9	1.4
12.0	10.0	2.6	14.1	0.1	11.9	1.9	12.1	1.2	10.6	2.7	12.8	1.4
13.0	9.8	2.3	13.9	0.1	11.8	1.8	11.9	1.2	10.3	2.5	12.7	1.3
14.0	9.8	2.2	13.3	0.1	11.8	1.8	11.9	1.1	10.2	2.3	12.6	1.3
15.0	9.8	1.9	13.2	0.1	11.7	1.7	11.9	1.0	10.2	2.3	12.5	1.3
16.0	-	-	-	-	11.5	1.6	-	-	-	-	12.3	0.9
17.0	-	-	-	-	11.5	1.5	-	-	-	-	-	-

WATER QUALITY SUMMARY

PIPER POND, ABBOT

Midas: 298, Sample Station # 1, center of pond.

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate present water quality, track algae blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for Piper Pond has been collected occasionally since 1981. During this period, 4 years of basic chemical information was collected, in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Piper Pond is considered to be above average, based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance alga blooms on Piper Pond is low.

Water Quality Measures: Piper Pond is a non-colored lake (average color 14 SPU) with an average SDT of 6.4m (21ft). The range of water column TP for Piper Pond is 5-11 parts per billion (ppb) with an average of 7 ppb (State average is 12ppb), while Chla ranges from 1.8-3.7 ppb with an average of 2.7 ppb (State average 4.8ppb). Recent dissolved oxygen (DO) profiles show low to moderate DO depletion in deep areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is moderate. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

Inland Fisheries and Wildlife considers this pond both a warm-water and cold-water fishery. Water quality appears to be relatively stable. At least 8 years of data are needed to determine a true trend since lakes react to seasonal differences in rain, sunlight and temperature.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at <http://www.lakesofmaine.org/> and/or <http://www.maine.gov/dep/blwq/lake.htm>, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

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